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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,224	07/29/2003	Jae-Gab Lee	45331	4767

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WASHINGTON,, DC 20036

EXAMINER

TRAN, NHAN T

ART UNIT	PAPER NUMBER
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2622

MAIL DATE	DELIVERY MODE
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10/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/628,224

Applicant(s)

LEE ET AL.

Examiner

Nhan T. Tran

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/13/2007 & 7/29/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 15, 18 and 24 is/are rejected.
- 7) ☒ Claim(s) 7-14, 16, 17, 19-23, 25 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. The amendment to claims 1-26 has fully been considered. The restriction mailed 7/11/2007 has been withdrawn in view of the amendment.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, 15, 18 & 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wada (US 6,965,413) in view of Armstrong (US 6,347,997).

Regarding claim 1, Wada discloses a bar-type wireless communication terminal comprising (see Figs. 5A & 5B, wherein the camera phone is vertically open as a bar-type wireless communication terminal, and Figs. 3A & 3B also show closed configuration of the camera phone that also meets a bar-type structure):

a lower body (2) having a camera lens unit (11 shown in Fig. 5B) arranged in its one side (see col. 4, line 64 – col. 5, line 3), a first keypad arranged in its front side (Fig. 2, wherein a plurality of keypads provided on the front side of the lower body 2); and an upper body (1) having a display device (6) disposed in its front side (Fig. 2), said upper body being coupled to an upper end of the lower body in such a manner that the upper body is allowed to rotate in a twisted direction with respect to a rotation axis extending in a longitudinal direction of the lower body (see Figs. 3C, 4, 5A-5B and col. 3, line 16 – col. 5, line 20).

Wada does not teach that the lower body has a second keypad arranged in its rear side.

However, Armstrong teaches a practice of constructing a second operation key (18 shown in Figs. 3 & 9) on a back side of a lower portion of a handheld device such as a camera phone in addition a first operation key on the front side of the device so as to allow the user conveniently manipulate the device while holding the device with the fingers on the back side (see Armstrong, col. 6, lines 56-65 and col. 8, lines 12-34).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the camera phone in Wada to incorporate the teaching of Armstrong such that the lower body has a second keypad arranged in its rear side in addition to the keypad in the front side so as to allow the user to conveniently manipulate the device while holding the device with the fingers on the back side as suggested Armstrong.

Regarding claim 2, although Wada does not disclose that the upper body comprises a third keypad arranged below the display device, Armstrong suggests to provide a keypad (14 shown in Fig. 9) located at proximity and right under a display device (22) for scrolling the image. (Armstrong, col. 8, lines 11-34).

Therefore, it would have been obvious to one of ordinary skill in the art to further provide a third keypad under the display device on the upper body so that the user would easily scroll the captured image for better viewing.

Regarding claim 3, the combined teaching of Wada and Armstrong also teach that the first keypad has a 3 x 4 array and is adapted to input data including numbers and characters (see Armstrong, Figs. 3 & 9).

Regarding claim 4, as suggested by Wada, a shutter button for taking an image can be located anywhere on the lower body (see Wada, col. 5, lines 16-20). Therefore, it would have been obvious to one of ordinary skill in the art to configure the second keypad in combined teaching of Wada and Armstrong to have a function of a shutter switch for the camera unit so as to allow the user to easily press the shutter button by his/her thumbnail when holding the camera phone as shown in Fig. 5B of Wada.

Regarding claim 5, the combined teaching of Wada and Armstrong also discloses that the second keypad has as function of a zoom switch for the camera lens unit (see Armstrong, col. 7, lines 25-28).

Regarding claim 6, Wada also discloses a first hinge base fixed in the lower body (Fig. 4), the first hinge base having a hinge housing (8h) and first coupling arms (8c) extended in opposite directions from a lower end of the hinge housing, the hinge housing defining a vertically extended receiving space; and a second hinge base fixed in the upper body (Fig. 4), the second hinge base having a rotating member (8j) and second coupling arms (bases 3a are considered as coupling arms) extended laterally in opposite directions from an upper end of the rotating member, the rotating member being received inside the hinge housing to rotate therein relative to a rotation axis extending in a vertical (see Fig. 4 and col. 3, lines 16-47).

Regarding claim 15, Wada also discloses that the rotating member is formed with a vertically extended through hole.

Regarding claim 18, Wada discloses a first hinge base (Fig. 4) having a hinge housing and first coupling arms extended laterally in opposite directions from a lower end of the hinge housing, the hinge housing defining a vertically extended receiving space, the first hinge base being fixed inside the lower body so that the hinge housing (8h) is protruded upwardly out of the upper end of the lower body at its upper end; and a second hinge base (Fig. 4) having a rotating member and second coupling arms extended laterally in opposite directions from an upper end of the rotating member, the rotating member being coupled to the hinge housing to rotate therein relative to a

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rotation axis extending in a vertical direction of the first hinge base, the second hinge base being fixed inside the upper body so that the rotating member is protruded downwardly out of a lower end of the upper body at its lower end (see Fig. 4 and col. 3, lines 16-47).

Regarding claim 24, Wada discloses that the rotating member is formed with a with a vertically extended through hole for providing a passage for a flexible printed circuit (16) (see Fig. 4).

4. Claims 1 & 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukahara et al. (US 6,295,088) in view of Armstrong (US 6,347,997).

Regarding claim 1, Tsukahara discloses a bar-type wireless communication terminal comprising (see Figs. 1-5 and col. 3, lines 35-39):

a lower body (61) having a camera lens unit (63) arranged in its one side (Fig. 1), a first keypad (11 and/or 13 shown in Figs. 1 & 4) arranged in its front side; and an upper body (62) having a display device (64) disposed in its front side (Fig. 1), said upper body being coupled to an upper end of the lower body in such a manner that the upper body is allowed to rotate in a twisted direction with respect to a rotation axis extending in a longitudinal direction of the lower body (see Figs. 1-4).

Wada does not teach that the lower body has a second keypad arranged in its rear side.

However, Armstrong teaches a practice of constructing a second operation key (18 shown in Figs. 3 & 9) on a back side of a lower portion of a handheld device such as a camera phone in addition a first operation key on the front side of the device so as to allow the user conveniently manipulate the device while holding the device with the fingers on the back side (see Armstrong, col. 6, lines 56-65 and col. 8, lines 12-34).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the wireless camera device in Tsukahara to incorporate the teaching of Armstrong such that the lower body has a second keypad arranged in its rear side in addition to the keypad in the front side so as to allow the user to conveniently manipulate the device while holding the device with the fingers on the back side as suggested Armstrong.

Regarding claim 2, as shown in Figs. 1 & 3 of Tsukahara, said upper body further comprises a third keypad (13) arranged below the display device.

Allowable Subject Matter

5. Claims 7-14, 16-17, 19-23, 25-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

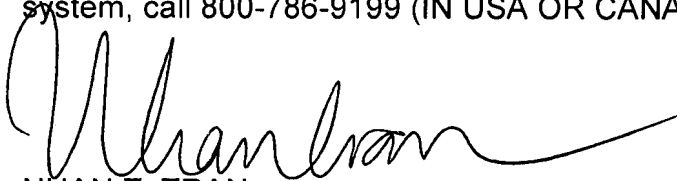
Conclusion

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-7371. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



NHAN T. TRAN
Patent Examiner